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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/191,708	11/13/1998	BRIJ BHUSHAN GARG	L0012/7004	8933

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EXAMINER

LY, ANH VU H

ART UNIT	PAPER NUMBER
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2667

DATE MAILED: 08/05/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/191,708

Applicant(s)

GARG ET AL.

Examiner

Anh-Vu H Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-9, 11-14, 16-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Sharony et al (US Patent No. 5,495,356). Hereinafter, referred to as Sharony.

With respect to claims 1 and 5, Sharony discloses in Fig. 3, a generalized switching network, wherein data, arranged as time slots 35 (bit packs) and space connections 33 from $m \times m$ blocks 31 (rails), are received at the $n \times \ln$ blocks 32 (apparatus for receiving a plurality of input bit packs organized in a combination of input data rails and time slots). Further, Sharony discloses (col. 2, lines 1-17 and Fig. 3) that a system in which an input and/or N inputs are connected to a passive broadcast medium that broadcasts an input and/or all the inputs to each one or all of N outputs (apparatus for selecting any of the input bit packs from any of the rails and any of the time slots and conveying the selected bit pack to any output data position within a combination of output data rails and time slots).

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With respect to claim 3, Sharony discloses (col. 2, lines 1-17 and Fig. 3) that a system in which N inputs (N bit packs) are connected to a passive broadcast medium that broadcasts all the inputs to each one of N outputs (apparatus for receiving, selecting, and conveying a plurality of bit packs is configured for selecting a plurality of bit packs for output in a plurality of output data positions).

With respect to claim 4, Sharony discloses (col. 2, lines 1-17 and Fig. 3) that an input (a bit pack) can be connected to one or more outputs, even one already connected, each input (a single bit pack) is provided with a unique set of spatial dimension, wavelength dimension, time slot dimension, and sometimes even with a direction dimension (apparatus for receiving, selecting, and conveying a plurality of bit packs is configured for selecting a single bit pack for output in a plurality of output positions).

With respect to claims 6, 11, 16, and 20-22, Sharony discloses in Fig. 3, a generalized switching network, wherein a plurality of selection blocks 32 are configured to broadcast data from one or more input channels to one or more output channels as a function of space dimension, wavelength dimension, and time slot dimension (M selection blocks, each configured to select a bit pack for a different one of the output positions). Further, Sharony discloses in Fig. 3, a generalized switching network, wherein data, arranged as time slots 35 (bit packs) and space connections 33 from $m \times m$ blocks 31 (rails), are received at the $n \times \ln$ blocks 32 (apparatus for receiving input data arranged as bit packs in T time slots on R rails. Further, Sharony discloses (col. 2, lines 1-17 and Fig. 3) that a system in which an input and/or N inputs are connected to a

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passive broadcast medium that broadcasts an input and/or all the inputs to each one of N outputs (apparatus for selecting data from any of the R rails and latching the selected data during a predetermined time slot to thereby select a bit pack of predetermined R and T values and conveying the selected bit pack to any output data position of predetermined T2 and R2 values).

With respect to claims 7 and 12, Sharony discloses in Fig. 3, each block 32 received input data from different $m \times m$ star block 31 (a $T2 \times R2$ output bit map configured for receiving a selected bit pack in each location from a different one of the M selection blocks).

With respect to claims 8 and 13, Sharony discloses in Fig. 3, each of $n \times l_n$ block 32 is processed in parallel and wherein the $n \times l_n$ block 32 broadcasts the selected input data to one or more output channels (a second $T2 \times R2$ output bit map configured to be loaded in parallel from first output bit map).

With respect to claims 9 and 14, Sharony discloses (col. 2, lines 1-17 and Fig. 3) that a system in which an input and/or N inputs are connected to a passive broadcast medium that broadcasts an input and/or all the inputs to each one of N outputs (apparatus configured to arrange input bit packs as an array of T time slots on R rails and to convey output bit packs from the second $T2 \times R2$ bit map on R2 rails in T2 time slots).

With respect to claim 17, Sharony discloses in Fig. 3, $n \times l_n$ block 32 receives signals or data from a plurality of connections 33 (receiving input data arranged as bit packs on N rails).

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With respect to claims 18 and 19, Sharony discloses (col. 2, lines 1-17 and Fig. 3) that a system in which an input and/or N inputs are connected to a passive broadcast medium that broadcasts an input and/or all the inputs to each one of N outputs (selecting a bit pack from any of N rails and conveying the selected bit pack to an output position of predetermined T2 and R2 values).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sharony et al (US Patent No. 5,495,356) in view of Sheafor et al (US Patent No. 6,223,242). Hereinafter, referred to as Sharony and Sheafor.

With respect to claim 2, Sharony discloses in Fig. 3, data (bit pack) from any of the time slots or channels is broadcasted to one or more output channels. Sharony does not disclose that each bit pack is one bit wide. Sheafor discloses in Fig. 8, a switching system, wherein each bit pack d0 is one bit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure each bit pack as one bit in Sharony's system, as suggested by Sheafor, for independently switching to maintain high data throughput.

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4. Claims 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharony et al (US Patent No. 5,495,356).

With respect to claims 10 and 15, Sharony discloses in Fig. 3, a plurality of input connections N-1 and a plurality of output connections N-1. Sharony does not disclose that $N=M=768$. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to configure such plurality of input and output connections to any number of input and output connections in Sharony's system, as a function of cost and complexity of the switching system.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Garg et al (US Patent No. 6,584,121) discloses switch architecture for digital multiplexed signals.

Herkersdorf et al (US Patent No. 6,556,593) discloses digital cross connect and add/drop multiplexing device for SDH or SONET signals.

Lindberg (US Patent No. 6,366,579) discloses modular time-space switch.

Richards (US Patent No. 4,817,083) discloses a switching network.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 703-306-5675. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

avl
July 30, 2003


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 7/31/03